**SCA ASSIGNMENT I**

**PROGRAMMING PARADIGMS**

A **programming paradigm** is a style, or way of programming. Some languages are easier to write in some paradigms but others are not. A program can contain more than a paradigm so it is not mutually exclusive. There are a number of paradigms used in programming such as;

* Imperative programming
* Functional programming
* Procedural programming
* Object-oriented programming
* Declarative programming
* Structured programming
* Logic programming

**Imperative programming** paradigm executes command in a step-by-step manner in a way that you sort of give some verbal commands. It normally give an approach on how to solve it and it makes a direct change on the state on the program.

**Procedural Programming** paradigm divides the program into procedures, which are also known as routines or functions, simply containing a series of steps to be carried out. A predefined function, which is usually a major feature of this method of programming, is typically an instruction identified by a name.

**Functional programming paradigm** is the process of programming by composing pure **function** (which returns same values for the same inputs and also does not change the attributes of the program outside the function). Functional code tends to be more concise and easier to test than imperative or object oriented programming.

**Object Oriented Programming (OOP)** paradigm relies on the concept of classes and objects. It is used to structure a software program into simple, reusable pieces of code blueprints (usually called classes) which are used to create individual instances of objects. OOP usually contain classes, objects, attributes.

[**Declarative programming**](https://en.wikipedia.org/wiki/Declarative_programming) paradigm basically involves instructing a program on what needs to be done, instead of telling it how to do it or showing how it is being done. They always describe the desired end result rather than outlining all the intermediate work steps.

**Structured programming uses** flowcharting as a method of documenting the paths that a program would execute. There are three main categories in this control structure which are; **sequence** (which follows one instruction then the next and the next.), **selection** (choosing between two or more paths and this choice is normally influenced by a question that determines which path to follow) and **iteration** (which is known as repetition or looping and it allows a code to run for several times depending on how many times it ought to).

**WHAT IS TRELLO?**

Trello is a tool (in the form of an application) that organizes your projects into boards or lists. In one peek, Trello tells you what's being worked on, who's working on what, and where something is in a process. It is a great tool for project management and task management.